UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,523	04/20/2006	Peter Geskes	016906-0506	3618
	7590 03/01/201 LARDNER LLP	EXAMINER		
SUITE 500	T NIW	FLANIGAN, ALLEN J		
3000 K STREET NW WASHINGTON, DC 20007			ART UNIT	PAPER NUMBER
			3744	
			MAIL DATE	DELIVERY MODE
			03/01/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Application No.   Application   Application No.   GESRES ET AL							
## Examiner ## Art Unit ## Alen J. Flanigan ## 3744  - The MAILING DATE of this communication appears on the cover sheet with the correspondence address - Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  • Extensions of time may be available under the provisions of 37 CFR 1.356(1), In no event, nowewer, may a risply be timely filed with 93 (MONTH) from the maining date of this communication.  • Fallianto insigh, while the earl or extensional provisions of 37 CFR 1.356(1), In no event, nowewer, may a risply be timely filed with 93 (MONTH) from the maining date of this communication.  • Fallianto insigh, while the earl or extensionation and a start for the provision of the 10 communication.  • Fallianto insigh, while the earl or extensionation and a start for the communication.  • Fallianto insigh, while the earl or extensionation and a start for the communication.  • Fallianto insigh, while the earl or extensionation and a start for the communication.  • Fallianto insigh, while the earl or extensionation and a start for the communication.  • Fallianto insigh, while the earl or early vall, by statuse, cause the application to become AILAND-CNETD (38 U.S.C. § 133).  A torreply recorded by the CTick extension the renalized date of this communication, even if threely filed, may reduce any semice part of the communication.  • Fallianto insigh, while the earl or earlies and a start for the communication.  • Fallianto insigh, while the earlies and the fall insight of the communication.  • Fallianto insight insight of the communication.  • Fallianto insight in		Application No.	Applicant(s)				
Allen J. Flanigan 3744  Allen J. Flanigan 3744  Allen J. Flanigan 3744  Allen J. Flanigan 3744  ASHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  BY ASHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  BY ASHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  BY ASHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  BY ASHORTENED STATUTORY PERIOD FOR THE MAILING DATE OF THIS COMMUNICATION.  BY DEPOSITION THE MAILING STATUTORY PERIOD FOR THE MAILING DATE OF THIS COMMUNICATION.  BY DEPOSITION THE MAILING STATUTORY PERIOD FOR THE MAILING DATE OF THIS COMMUNICATION.  ASSISTANCE OF THE MAILING STATUTORY PERIOD FOR THE MAILING DATE OF THIS COMMUNICATION.  ASSISTANCE OF THE MAILING STATUTORY PERIOD FOR THE MAILING DATE OF THE MAILING STATUTORY PROFILE THE MAILING DATE OF THE MAILING STATUTORY PROFILE THE MAILING DATE OF THE MAILING STATUTORY PROFILE THE MAI		10/576,523	GESKES ET AL.				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address = Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  Between some term may be available under the provisions of 3 CFR 1.1866, in no event however, may a reply be trinely field with the CR (5) (4) MONTHS from the inalities date of this communication, and the CR (7) (4) MONTHS from the inalities date of this communication, and the CR (7) (4) MONTHS from the realities date of this communication, and the CR (7) (4) MONTHS from the realities date of this communication, and the CR (7) MONTHS from the realities date of this communication, and the corresponding date of this communication, and corresponding date of this communication, and the corresponding date of this communication, and the corresponding date of this communication.  **Status**  1) □ Responsive to communication(s) filed on \$\frac{16}{16} December 2009.**  2a) □ This action is FINAL. 2b) □ This action is non-final.  3) □ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under \$\infty\$ x and the process of the corresponding of the corresponding to the corresponding to the corresponding of the corresponding to the corresp	Office Action Summary	Examiner	Art Unit				
Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of their may be available under the provisions of 37 CFR 1.1346;. Inno events however, may a may be tumbly filled.  - Extensions of their may be available under the provisions of 37 CFR 1.1346;. Inno events however, may a may be tumbly filled.  - If NO pariod for regly is specified above. The maximum autabuty period with giving and will expect so; (i) (SICMTHS from the maring case of this communication to regly its period to reply with the treating date of this communication, over if filled from the maring case of this communication, over if filled from the region of the communication, over if filled from the region of the communication, over if filled from the region of the communication, over if filled from the region of the communication, over if filled from the region of the communication, over if filled from the region of the communication, over if filled from the region of the communication, over if filled from the region of the communication, over if filled from the region of the communication over in the communication over the region of the communication.  1) □ Responsive to communication (s) filled on 16 December 2009.  2a □ This action is FINAL. 2b) ∏ This action is non-final.  3) □ Since this application is in condition for all deviation from from representation.  4a) Of the above claim(s) \$\frac{4.58.11 \text{ and } \text{ fill of Communication of Claims}}  4) □ Claim(s) \$\frac{1.17}{2}\$ is fare pending in the application.  4a) □ Claim(s) \$\frac{1.17}{2}\$ is a claim of the proving the correction is required in the development of the communication.  1b) □ Claim(s) \$\frac{1.17}{2}\$ is a claim for foreign priority under 35 U.S.C. \$\frac{1.19}{2}\$ (1.9).  1c) □ The drawing(s		Allen J. Flanigan	3744				
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  Eatmostor of time raby be assigned by the maximum standary period will rapply and will opply and will opply so the communication of 30°CF14 1.30(a). In or event, may a rapply to milky flide  If NO period for rapply is specified above, the maximum standary period will apply and will opply SIX (6) MONTHS from the maining clase of this communication.  Failure to reply within the sold creaming class of this communication, even if timely filled, may reduce any search period to become APACHOED (38 U.S.C. § 133).  Failure to reply with fill the sold above, the maximum standary period will apply and will opply and wi		opears on the cover sheet with the c	correspondence address				
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  - Estination of time may be available under the proximan of 37 CPR 1.136(a). In or event, become, may a reply the limiter place of the TSX (6) MONTHS from the mailing date of this communication.  - If NO pend for reply is appealisation and an advantage of the communication of the proximation of the proxim	• •						
1) Responsive to communication(s) filed on 16 December 2009.  2a) This action is FINAL. 2b) This action is non-final.  3 Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4   Claim(s) 1-17 is/are pending in the application. 4a) Of the above claim(s) 4.5.8.11 and 17 is/are withdrawn from consideration.  5   Claim(s) is/are allowed.  6   Claim(s) 1-3.6.7.9.10 and 12-16 is/are rejected.  7   Claim(s) is/are objected to.  8   Claim(s) are subject to restriction and/or election requirement.  Application Papers  9   The specification is objected to by the Examiner.  10   The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11   The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12   Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2   Certified copies of the priority documents have been received in Application No.  3   Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.    Attachment(e)   Interview Summary (PTO-413)   Paper No(s) Mail Data.   All Disposers of Patent Drawing Review (PTO-948)   Notice of Informal Patent Application	WHICHEVER IS LONGER, FROM THE MAILING I  - Extensions of time may be available under the provisions of 37 CFR 1 after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory perior - Failure to reply within the set or extended period for reply will, by statu Any reply received by the Office later than three months after the maili	DATE OF THIS COMMUNICATION  .136(a). In no event, however, may a reply be tind  d will apply and will expire SIX (6) MONTHS from the, cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).				
2a)  This action is FINAL.  3  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4  Claim(s) 1-17 is/are pending in the application. 4a) Of the above claim(s) 4.5.8.11 and 17 is/are withdrawn from consideration. 5  Claim(s) is/are allowed. 6  Claim(s) 1-3.6.7.9.10 and 12-16 is/are rejected. 7  Claim(s) is/are objected to. 8  Claim(s) are subject to restriction and/or election requirement.  Application Papers  9  The specification is objected to by the Examiner. 10  The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) Nonce of: 1.  Certified copies of the priority documents have been received. 2.  Certified copies of the priority documents have been received in Application No. 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.	Status						
2a)  This action is FINAL.  3  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4  Claim(s) 1-17 is/are pending in the application. 4a) Of the above claim(s) 4.5.8.11 and 17 is/are withdrawn from consideration. 5  Claim(s) is/are allowed. 6  Claim(s) 1-3.6.7.9.10 and 12-16 is/are rejected. 7  Claim(s) is/are objected to. 8  Claim(s) are subject to restriction and/or election requirement.  Application Papers  9  The specification is objected to by the Examiner. 10  The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) Nonce of: 1.  Certified copies of the priority documents have been received. 2.  Certified copies of the priority documents have been received in Application No. 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.	1) Responsive to communication(s) filed on 16	December 2009.					
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4) Claim(s) 1-17 is/are pending in the application. 4a) Of the above claim(s) 4.5.8.11 and 17 is/are withdrawn from consideration. 5) Claim(s) is/are allowed. 6) Claim(s) 1-3.6.7.9.10 and 12-16 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892) All Molice of References Cited (PTO-892) Paper Note(MMail Date. Paper Note(Molice of Informal Patern Application	· · · · · · · · · · · · · · · · · · ·						
Algorithm of Claims  4) Claim(s) 1-17 is/are pending in the application. 4a) Of the above claim(s) 4.5.8.11 and 17 is/are withdrawn from consideration.  5) Claim(s) is/are allowed. 6) Claim(s) is/are allowed. 6) Claim(s) 1-3.6.7.9.10 and 12-16 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are: a) cecepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b Some of None of:  1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.	· <u> </u>						
4)	closed in accordance with the practice under	Ex parte Quayle, 1935 C.D. 11, 45	53 O.G. 213.				
4a) Of the above claim(s) 4.5.8.11 and 17 is/are withdrawn from consideration.  5) □ Claim(s) is/are allowed.  6) ☒ Claim(s) is/are allowed.  7) □ Claim(s) is/are objected to.  8) □ Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) □ The specification is objected to by the Examiner.  10) □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) □ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☒ All b) □ Some * c) □ None of:  1. ☒ Certified copies of the priority documents have been received.  2. □ Certified copies of the priority documents have been received in Application No  3. □ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) ☒ Notice of Potratsperson's Patent Drawing Review (PTO-948)  3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  5) ☐ Notice of Informal Patent Application	Disposition of Claims						
4a) Of the above claim(s) 4.5.8.11 and 17 is/are withdrawn from consideration.  5) □ Claim(s) is/are allowed.  6) ☒ Claim(s) is/are allowed.  7) □ Claim(s) is/are objected to.  8) □ Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) □ The specification is objected to by the Examiner.  10) □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) □ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☒ All b) □ Some * c) □ None of:  1. ☒ Certified copies of the priority documents have been received.  2. □ Certified copies of the priority documents have been received in Application No  3. □ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) ☒ Notice of Potratsperson's Patent Drawing Review (PTO-948)  3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  5) ☐ Notice of Informal Patent Application	4)⊠ Claim(s) 1-17 is/are pending in the application.						
o) Claim(s) 1-3.6.7.9.10 and 12-16 is/are rejected.  7) Claim(s) is/are objected to.  8) Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) The specification is objected to by the Examiner.  10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some col None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Altachment(s)  1) Notice of References Cited (PTO-892)  Altachment(s)  Paper No(s)/Mail Date  Paper No(s)/Mail Date  Notice of Informal Patent Application							
7)  Claim(s) is/are objected to. 8)  Claim(s) are subject to restriction and/or election requirement.  Application Papers  9)  The specification is objected to by the Examiner.  10)  The drawing(s) filed on is/are: a)  accepted or b)  objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a)  All b)  Some * c)  None of:  1.  Certified copies of the priority documents have been received.  2.  Certified copies of the priority documents have been received in Application No  3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1)  Notice of References Cited (PTO-892)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  3)  Interview Summary (PTO-413)  Paper No(s)/Mail Date  5)  Notice of Informal Patent Application							
Application Papers  9) The specification is objected to by the Examiner.  10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO/SB/08)  5) Notice of Informal Patent Application	6) Claim(s) 1-3,6,7,9,10 and 12-16 is/are rejected.						
Application Papers  9) ☐ The specification is objected to by the Examiner.  10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☒ All b) ☐ Some * c) ☐ None of:  1. ☒ Certified copies of the priority documents have been received.  2. ☐ Certified copies of the priority documents have been received in Application No  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) ☒ Notice of References Cited (PTO-892)  □ Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  5) ☐ Notice of Informal Palent Application	7) Claim(s) is/are objected to.						
9) The specification is objected to by the Examiner.  10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some collar None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of Paferences Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO/SB/08)  5) Notice of Informal Patent Application	8) ☐ Claim(s) are subject to restriction and/	or election requirement.					
10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☒ All b) ☐ Some * c) ☐ None of:  1. ☒ Certified copies of the priority documents have been received.  2. ☐ Certified copies of the priority documents have been received in Application No  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) ☒ Notice of References Cited (PTO-892)  2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  5) ☐ Notice of Informal Patent Application	Application Papers						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No.  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO/SB/08)	9)☐ The specification is objected to by the Examir	ner.					
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO/SB/08)  5) Notice of Informal Patent Application	10) ☐ The drawing(s) filed on is/are: a) ☐ ac	cepted or b) objected to by the I	Examiner.				
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☒ All b) ☐ Some * c) ☐ None of:  1. ☒ Certified copies of the priority documents have been received.  2. ☐ Certified copies of the priority documents have been received in Application No  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) ☒ Notice of References Cited (PTO-892)  2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  5) ☐ Notice of Informal Patent Application	Applicant may not request that any objection to the	e drawing(s) be held in abeyance. See	e 37 CFR 1.85(a).				
Priority under 35 U.S.C. § 119  12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a)  All b)  Some * c) None of:  1.  Certified copies of the priority documents have been received.  2.  Certified copies of the priority documents have been received in Application No  3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1)  Notice of References Cited (PTO-892)  2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  3)  Information Disclosure Statement(s) (PTO/SB/08)	Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).						
12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☒ All b) ☐ Some * c) ☐ None of:  1. ☒ Certified copies of the priority documents have been received.  2. ☐ Certified copies of the priority documents have been received in Application No  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) ☒ Notice of References Cited (PTO-892)  2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  10 ☐ Notice of Informal Patent Application	11)☐ The oath or declaration is objected to by the E	Examiner. Note the attached Office	Action or form PTO-152.				
a) ☑ All b) ☐ Some * c) ☐ None of:  1. ☑ Certified copies of the priority documents have been received.  2. ☐ Certified copies of the priority documents have been received in Application No  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) ☑ Notice of References Cited (PTO-892)  2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) ☑ Information Disclosure Statement(s) (PTO/SB/08)  1 ☐ Notice of Informal Patent Application	Priority under 35 U.S.C. § 119						
1. ☐ Certified copies of the priority documents have been received. 2. ☐ Certified copies of the priority documents have been received in Application No 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s) 1) ☐ Notice of References Cited (PTO-892) 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  1 ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date 5) ☐ Notice of Informal Patent Application							
2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO/SB/08)  1 Information Disclosure Statement(s) (PTO/SB/08)  2 Notice of Informal Patent Application	,— ,— ,—						
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  * Attachment(s)  1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08)  * See the attached detailed Office action for a list of the certified copies not received.  4) Interview Summary (PTO-413) Paper No(s)/Mail Date.  5) Notice of Informal Patent Application							
* See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08)  * See the attached detailed Office action for a list of the certified copies not received.  4) Interview Summary (PTO-413) Paper No(s)/Mail Date.  5) Notice of Informal Patent Application							
Attachment(s)  1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08)  4) Interview Summary (PTO-413) Paper No(s)/Mail Date.  5) Notice of Informal Patent Application	application from the International Bureau (PCT Rule 17.2(a)).						
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) 4) Interview Summary (PTO-413) Paper No(s)/Mail Date. 5) Notice of Informal Patent Application	* See the attached detailed Office action for a list of the certified copies not received.						
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) 4) Interview Summary (PTO-413) Paper No(s)/Mail Date. 5) Notice of Informal Patent Application							
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Notice of Draftsperson's Patent Drawing Review (PTO-948)  Paper No(s)/Mail Date  Notice of Informal Patent Application	Attachment(s)						
3) 🔲 Information Disclosure Statement(s) (PTO/SB/08) 5) 🔲 Notice of Informal Patent Application							
, <u> </u>		5) Notice of Informal F					

Application/Control Number: 10/576,523

Art Unit: 3744

Claims 4, 5, 8, 11, and 17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention or species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/16/2009.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "tube surface . . . structured so as to generate turbulence" of claim 9 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

Application/Control Number: 10/576,523 Page 3

Art Unit: 3744

corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6 and 16 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 6 and 16, the phrase "in particular" renders the claims indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 6 will be construed, for the purposes of comparison with the prior art, in the broadest sense, as if the phrase "by soldering" is not a positive limitation of the claims.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6, 7, 10, and 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Southam.

Southam shows a rectangular housing 11 confining at least one tubular duct 30 provided with an internal corrugated fin 37, spaced apart by one or more externally corrugated elements 38.

Regarding claim 6, note that Southam specifically indicates that the external corrugations 38 are "attached to the top and bottom surfaces of the duct" 30. "Attached" is deemed to be the equivalent of "fixedly joined" with respect to the language of claim 6.

Regarding claim 10, it is noted that the embodiments shown in Fig. 5 of the applicant are described as illustrating the "inhomogeneous structure" recited in claim 10, and constitute a region at the inlet/outlet where the fin structure is omitted to allow the formation of a manifold space for the passage. Southam discloses the same type of feature in that corrugated elements 38 are disclosed as being shorter in length than the ducts to form flat lands 45 that permit the ready ingress and egress of fluid, and even indicates that they can be "cut on a bias at both the inlet and outlet ends thereof to distribute the flow of gas more evenly" (lines 54-57 of column 4). Compare with Fig. 5b of the instant application.

Regarding claim 12, note that the housing or "core" 11 of Southam is formed by at least four parts or components, namely top and bottom walls 22 and side walls 23.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3744

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Southam in view of Zifferer.

In general it is well known in the art of heat exchange to provide structures which enhance turbulence to reduce the thickness of a boundary layer adjacent a heat transfer surface. Thus, as pointed out in Zifferer, for heat exchangers designed to handle fluids such as liquids, gases, or mixtures thereof, it is known in the art to change the geometrical configuration of the surface of a heat exchanger tube by texturing the surface and/or forming corrugations in the surface to promote nonlaminar fluid flow that can "minimize the formation of a boundary layer and promote internal mixing of the fluid so that heat transfer takes place throughout the fluid" (see lines 8-42 of column 3 of Zifferer). Thus, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to adapt such surface configurations in the ducts of Southam to further enhance heat transfer efficiency.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Application/Control Number: 10/576,523 Page 6

Art Unit: 3744

The remaining references show various heat exchanger designs employing flat tubes with internal and/or external fin devices enclosed in housings.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen J. Flanigan whose telephone number is (571) 272-4910. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/576,523

Page 7

Art Unit: 3744